


REMARKS

The specification and claims are amended to correct typographical errors. Applicants apologize for not submitting these corrections sooner. No new matter is submitted.

Entry of this amendment is respectfully requested.

Respectfully submitted,
FROMMER LAWRENCE & HAUG LLP

By: 
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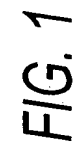
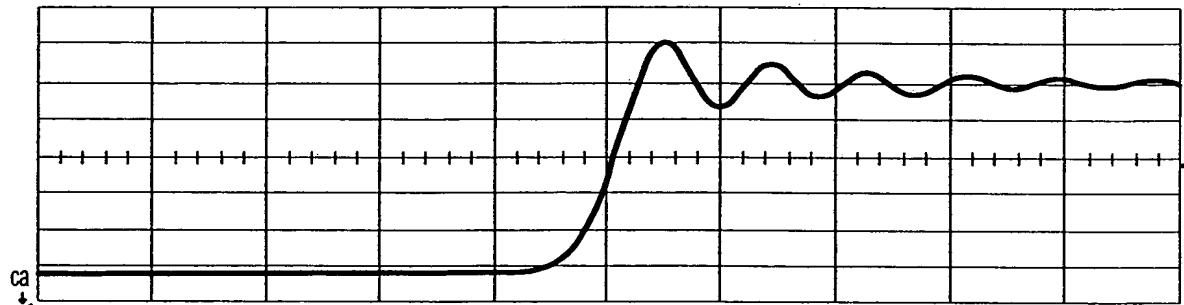


FIG. 2



MEASURE VALUE STATUS P1:rise(F1) 114 ps P2:ovsh+(F1) 20.0 % P3:Prep(F1) 40.381 m% P4 --- P5 --- P6 --- P7 --- P8 ---

C2
50.0 mV/div
234 mV offset

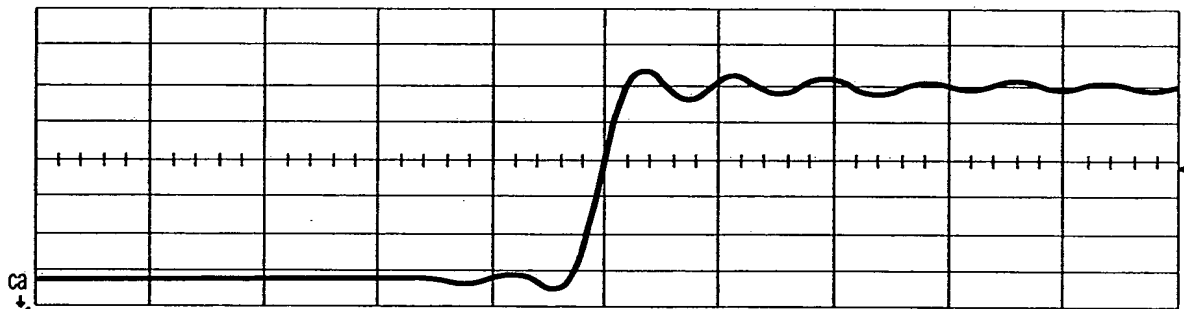
C4
200 mV/div
403 mV offset

F1 pmean(C2)
50.0 mV/div
200 mV offset

Timebase	-59.472 ns	Trigger	Normal
Seq 1000	200 ps	DC	C4 400.0mV
40.0 S	20.GS/s	EDGE	Positive

-234 -403 20.0 ps/div

FIG. 3



MEASURE VALUE STATUS P1:rise(F1) 74 ps P2:ovsh+(F1) 8.1 % P3:Prep(F1) 4.620141 m% P4:time@lv(c2) P5:npoints(c2) P6 --- P7 --- P8 ---

C2
50.0 mV/div
234 mV offset

C4
200 mV/div
403 mV offset

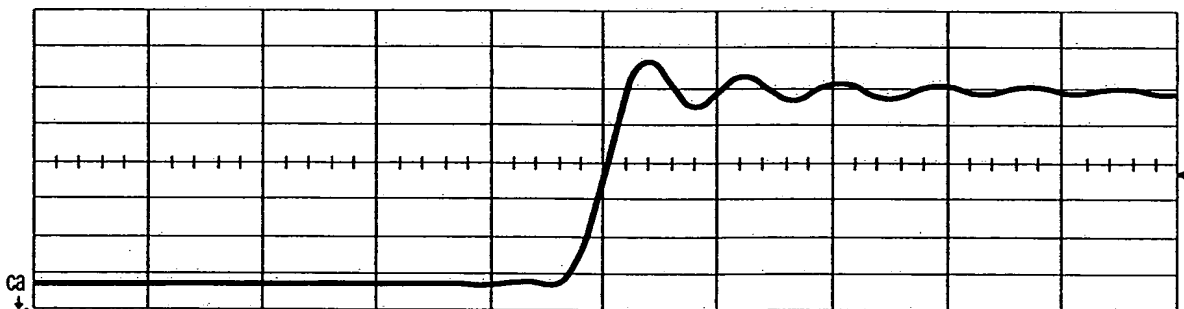
F1 pmean(C2)
50.0 mV/div
200 mV offset

Timebase	-59.472 ns	Trigger	Normal
Seq 1000	200 ps	DC	C4 400.0mV
#0.00 S	20.GS/s	EDGE	Positive

-234 -404 20.0 ps/div

40.0S

FIG. 4



MEASURE VALUE STATUS P1:rise(F1) 80 ps P2:ovsh+(F1) 13.4 % P3:Prep(F1) 1.426764 m% P4:time@lv(c2) P5:npoints(c2) P6 --- P7 --- P8 ---

C2
50.0 mV/div
234 mV offset

C4
200 mV/div
403 mV offset

F1 pmean(C2)
50.0 mV/div
200 mV offset

Timebase	-59.472 ns	Trigger	Normal
Seq 1000	200 ps	DC	C4 400.0mV
40.00 S	20.GS/s	EDGE	Positive

-234 -404 20.0 ps/div

Stopped

FIG. 5

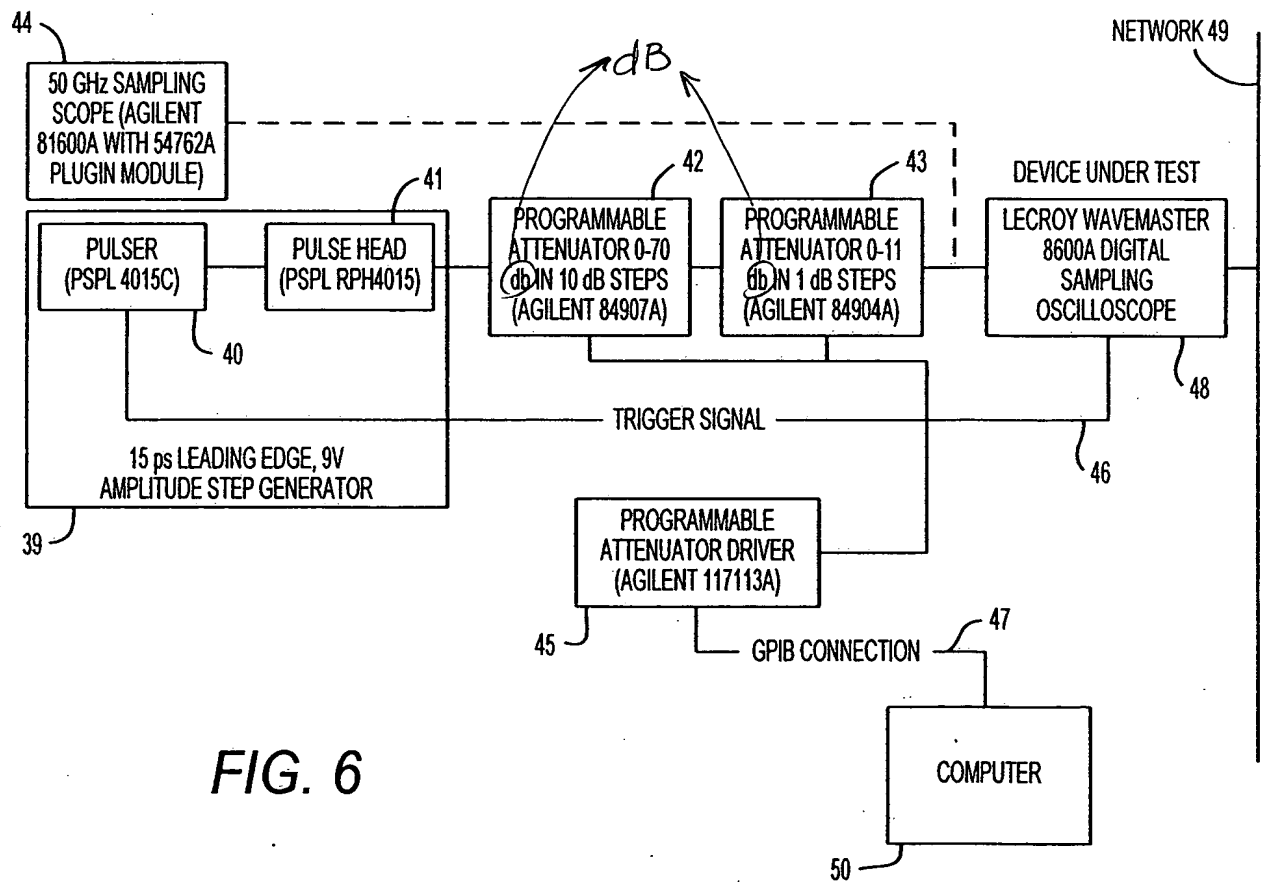
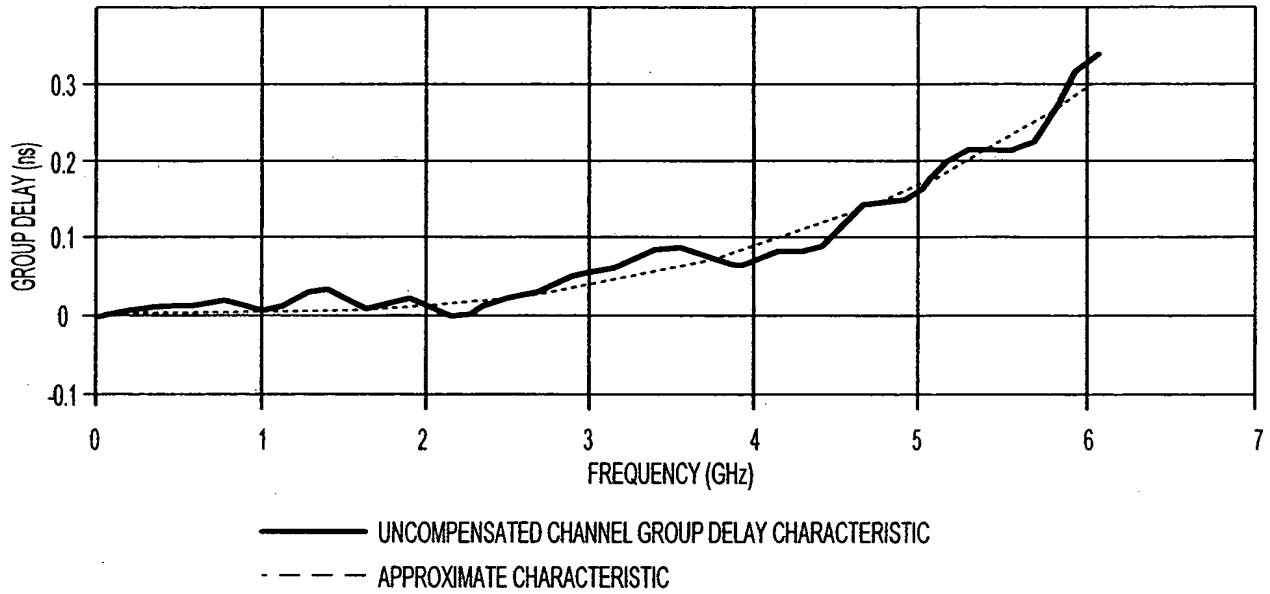


FIG. 7

DIALOG

RESPONSE ADVANCE GROUPDELA... GROUPDELAYO... SELFTEST

GROUP DELAY COMPENSATION

ALLOWED ☒

ENABLE ☒

VERNIER 1.00

VERNIER IN USE 720e-3

FREQUENCY POINTS 50

MAX FREQUENCY 6.3

MAX PHASE DELTA 30

TRY HARD TO FIT COMPENSATOR ☐

DEGREE OF COMPENSATION 3

TOLERANCE (ns) 0e-6

MAX ITERATIONS ALLOWED 30

MAXIMUM DELAY 1.0

ALPHA 1.5

APPROXIMATE ☒

AUTO DETERMINE POWER ☐

APPROXIMATE POWER 3.0

APPROXIMATE POWER IN USE 3.000000

EVALUATION

EVALUATE FILTERS ☒

ACTUAL INPUT EDGE 50.0e-3

CALCULATED RISETIME (ns) 83.8e3

CALCULATED OVERSHOOT (%) 12.250

CALCULATED PRESHOOT (%) 1.4063

CALCULATED TOP 266.8e-8

CALCULATED BASE -500e-8

OVERALL SCORE 97.58

☒ R ☒ W ☒ O SAVE

LOAD SAVED SETTINGS

CLOSE

FIG. 8

DIALOG

RESPONSE ADVANCE GROUPDELAY GROUPDELAYOPT SELFTEST

FUZZY RULE BASE

OVERSHOOT L PRESHOOT

	L	M	H
RISETIME L	Ap	AA	CC
M	Am	Bp	Cm
H	Dp	Dm	DD

OVERSHOOT M PRESHOOT

	L	M	H
RISETIME L	Ap	AA	CC
M	Am	Bp	Cm
H	Dp	Dm	DD

OVERSHOOT H PRESHOOT

	L	M	H
RISETIME L	AA	Am	Cm
M	Bp	BB	Dp
H	DD	FF	FF

FUZZY MEMBERSHIP

OVERSHOOT (%) L M H 15 20 25

PRESHOOT (%) L M H 500e-3 2.0 3.0

RISETIME (ns) L M H 76e-3 82e-3 89e-3

RISETIME ARE SPECIFIED FOR

BANDWIDTH 6.0

INPUT EDGE SPEED 35e-3

PRESHOOT MEASUREMENT SETTINGS

HYSTERESIS (%) 250e-3

APERTURE (ns) 1.0

INTERCEPT FACTOR 4.0

OPTIMIZATION STRATEGY

OPTIMIZE FILTERS ☒

TOP SCORES 4

POWER

START 2.0

END 4.0

GRID 200e-3

SCAN 1.0

VERNIER

START 300e-3

END 1.00

GRID 20e-3

SCAN 100e-3

FULL SEARCH ☐

DEBUG INFO ☐

SAVE

LOAD SAVED SETTINGS

CLOSE

1	for n=0 ...N	FOR EACH RESPONSE POINT
2	$R_n = \text{GD}_{\text{comprel}}(f_n, g_{i-1}) + \text{gd}_{\text{spec } n}$	CALCULATE A RESIDUAL
3	for j=0 ...2S-1	FOR EACH COEFFICIENT
4	$J_{n,j} = \frac{\partial}{\partial g_{i-1,j}} \text{GD}_{\text{comprel}}(f_n, g_{i-1})$	CALCULATE AN ELEMENT OF THE JACOBIAN MATRIX
5	$H = J^T \cdot W \cdot J$	CALCULATE THE APPROXIMATE HESSIAN MATRIX
6	for j=0 ... 2S-1 $2S-1$	GENERATE A MATRIX WHOSE DIAGONAL IS IDENTICAL TO THE HESSIAN MATRIX AND IS ZERO ELSEWHERE
7	$D_{jj} = H_{jj}$	
8	$\Delta P = (H + \lambda \cdot D)^{-1} \cdot J^T \cdot W \cdot R$	CALCULATE THE CHANGE TO THE COEFFICIENT VALUES
9	$g_i = g_{i-1} - \Delta P$	APPLY THE CHANGE TO THE COEFFICIENTS
10	$\text{mse}_i = \frac{1}{N+1} \cdot \sum_n (\text{gd}_{\text{spec } n} + \text{GD}_{\text{comprel}}(f_n, g_{i-1}))^2$	CALCULATE THE NEW MEAN SQUARED ERROR
11	<div style="display: flex; justify-content: space-between;"> true $\text{mse}_i > \text{mse}_{i-1}$ false </div>	DID THE MEAN SQUARED ERROR INCREASE ?
12	<div style="display: flex; justify-content: space-around;"> <div> $\lambda = \lambda \cdot 10$ FAVOR STEEPEST DECENT </div> <div> $\lambda = \frac{\lambda}{10}$ FAVOR NETWORK GAUSS CONVERGENCE </div> </div>	

FIG. 9

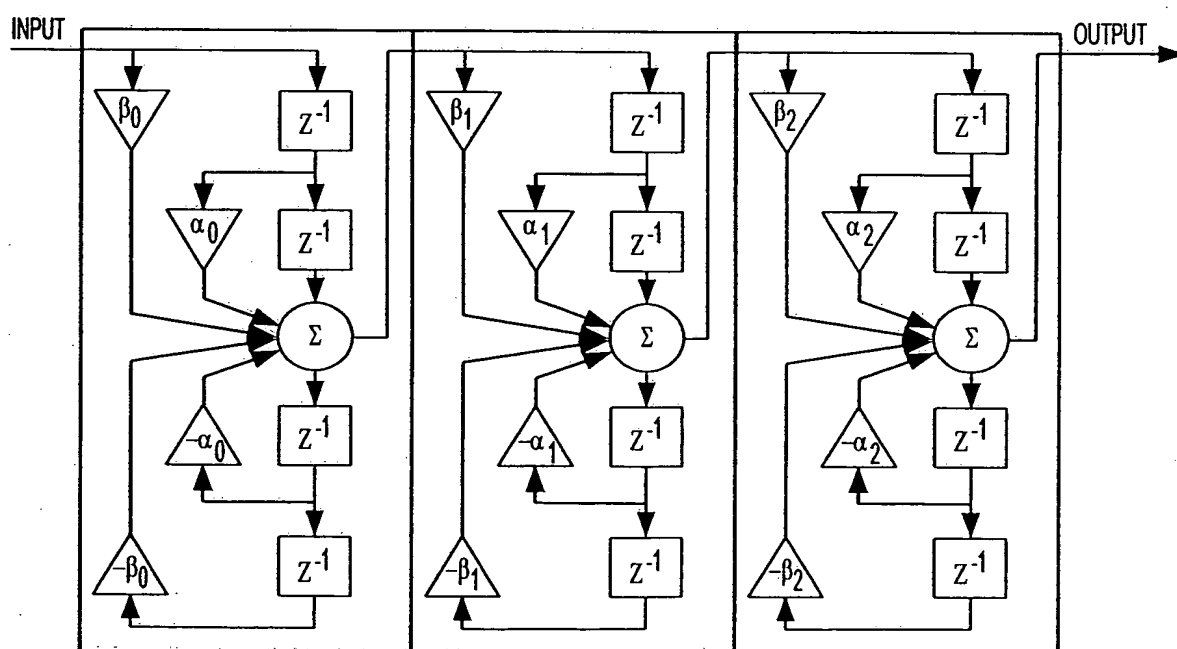


FIG. 10

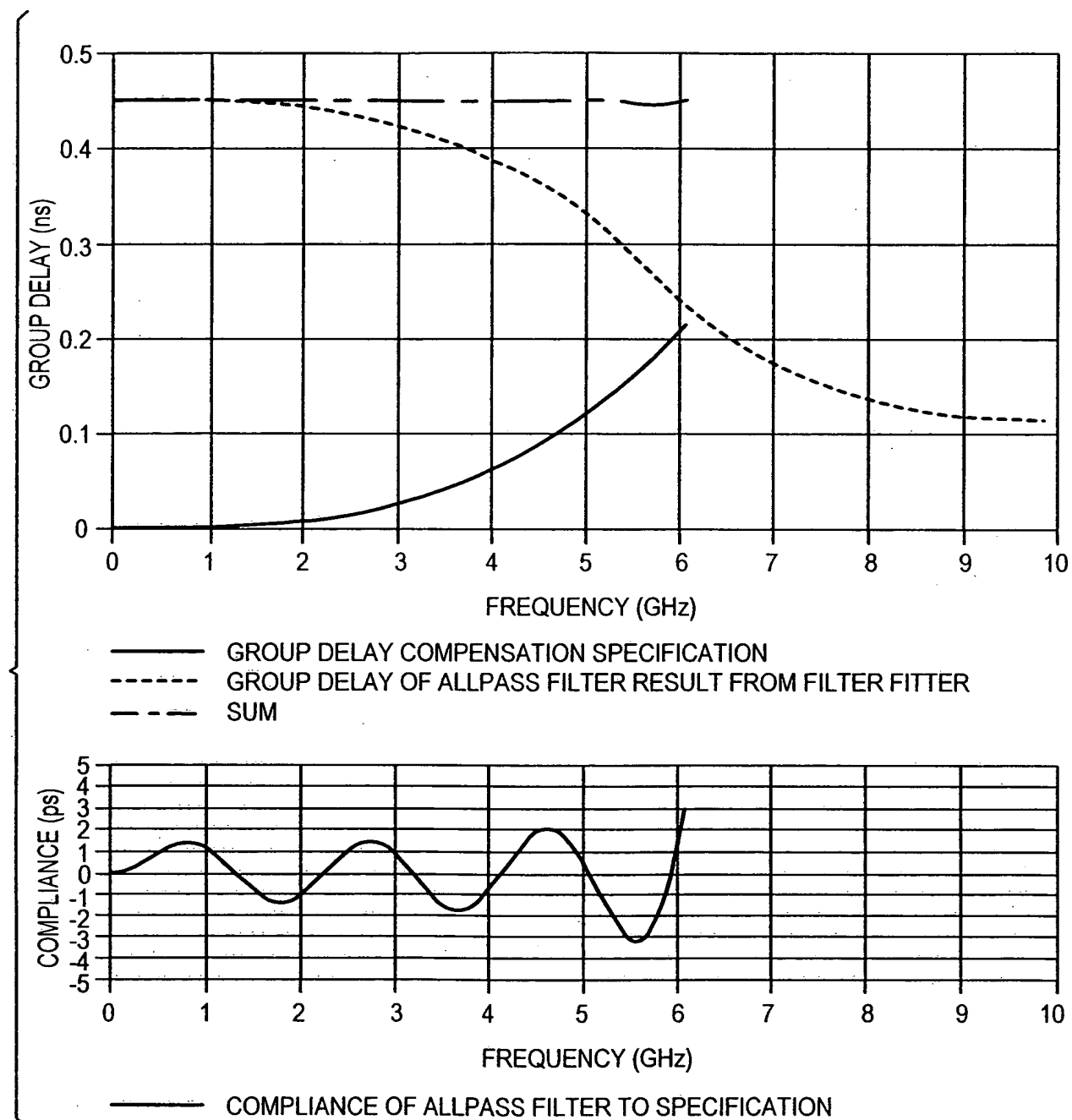


FIG. 11

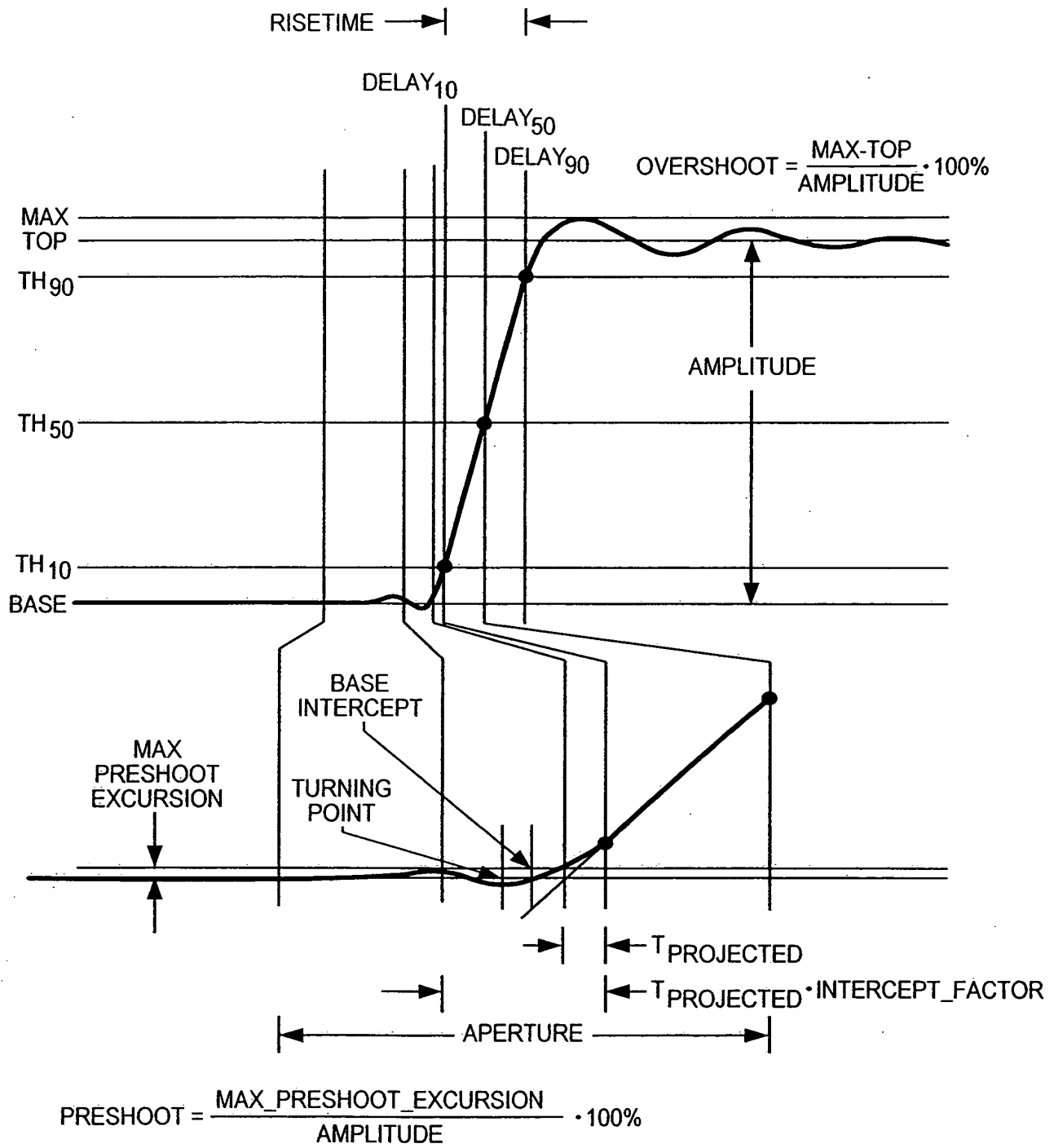


FIG. 12

FIG. 13

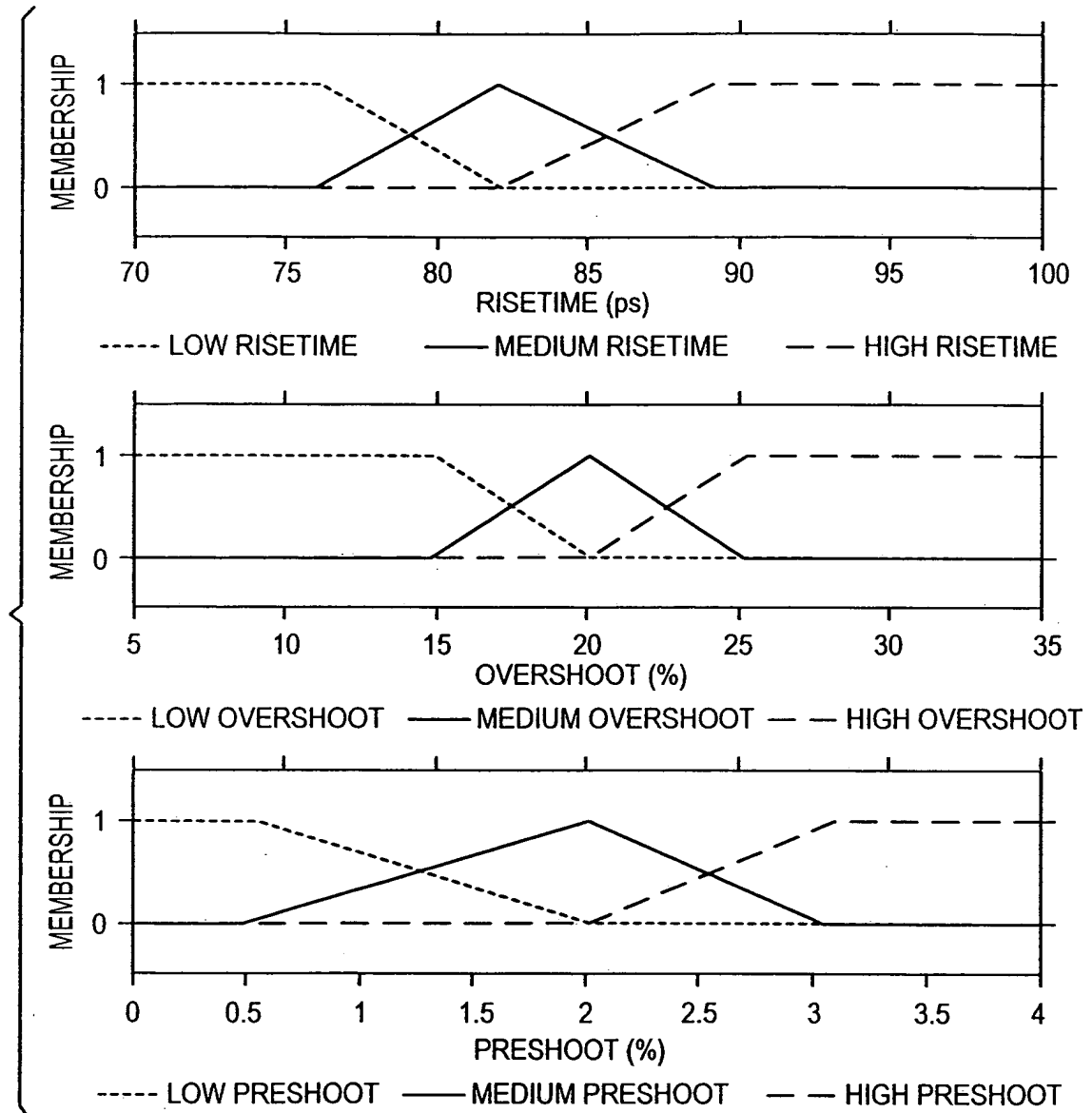
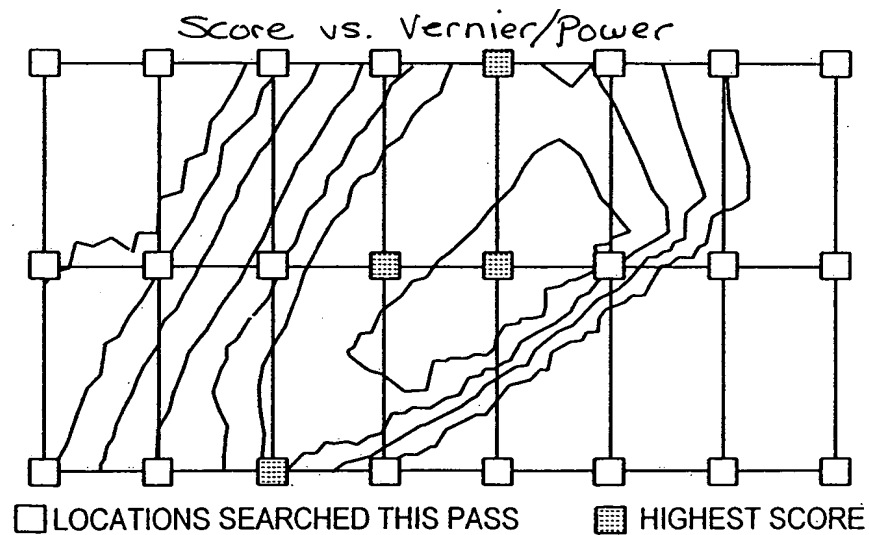


FIG. 14



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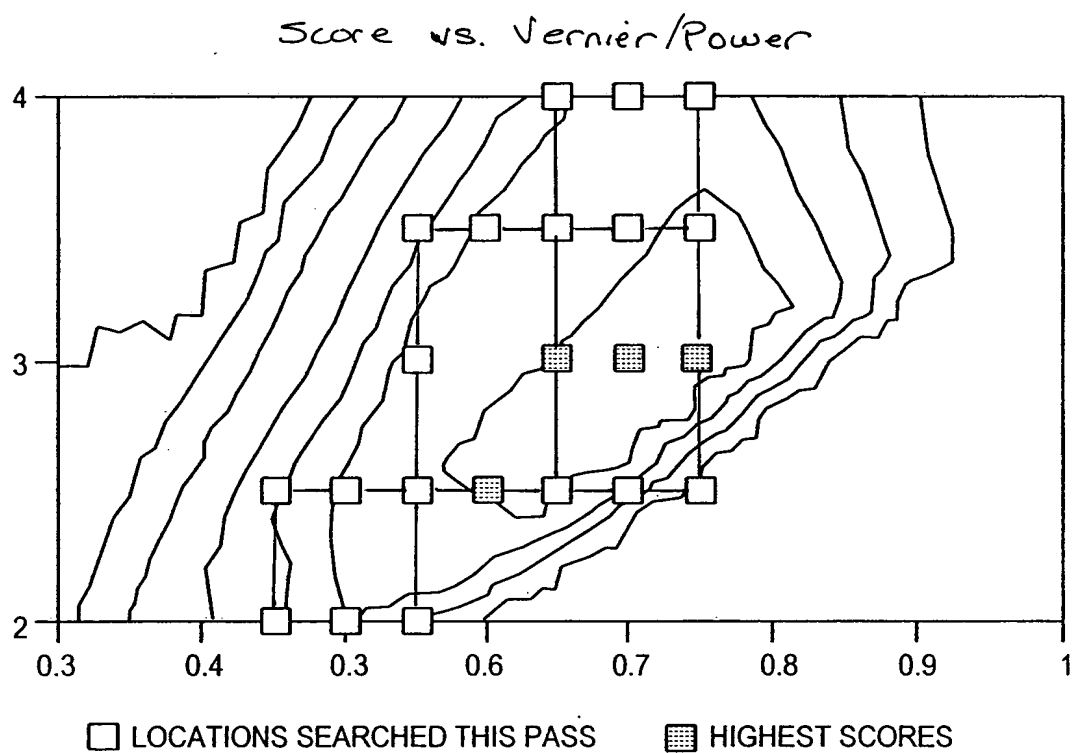


FIG. 15

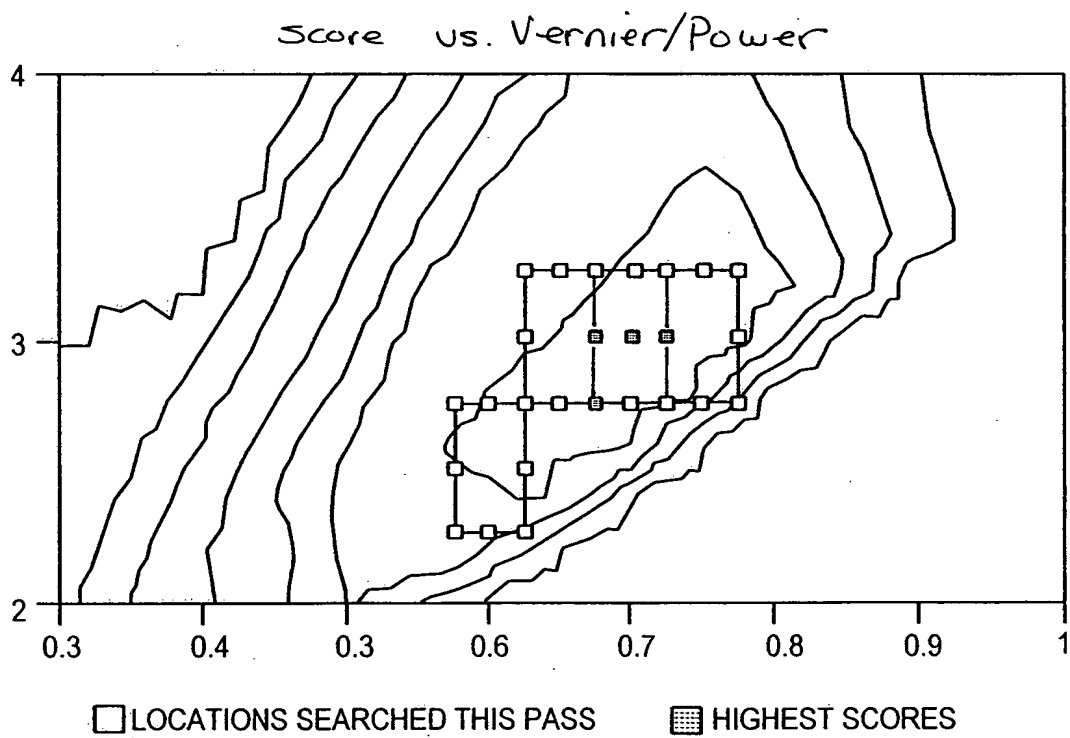


FIG. 16

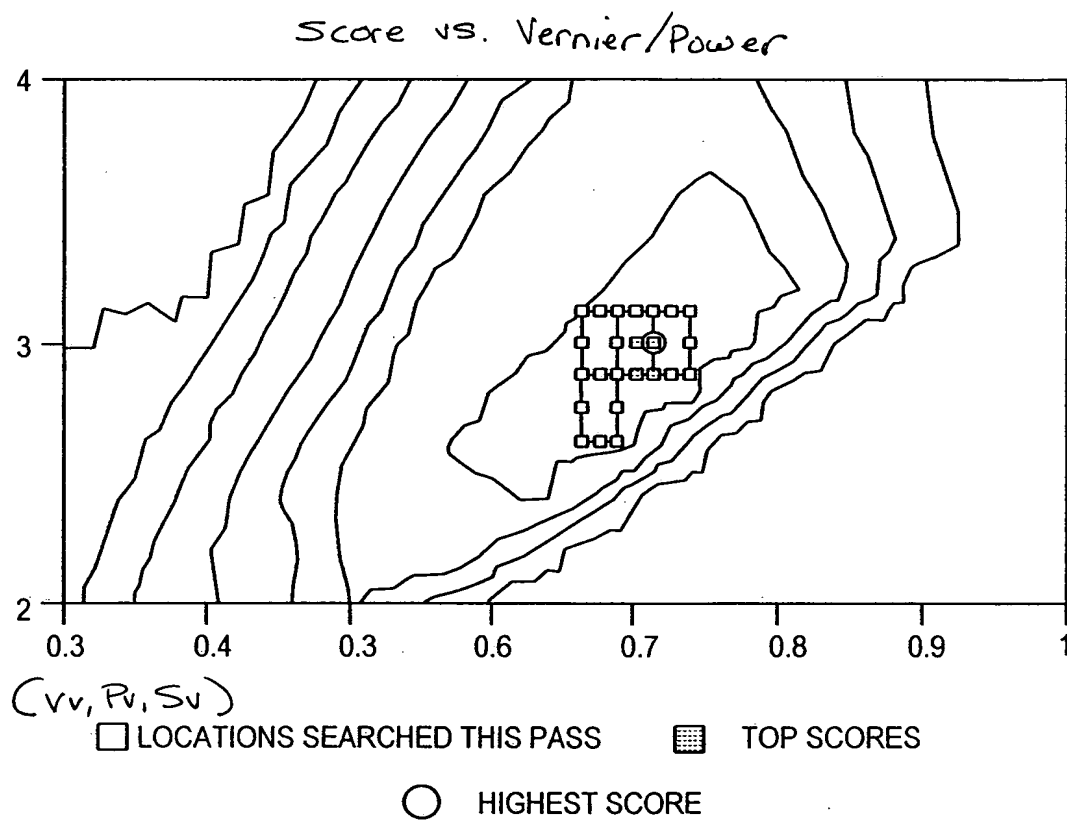


FIG. 17

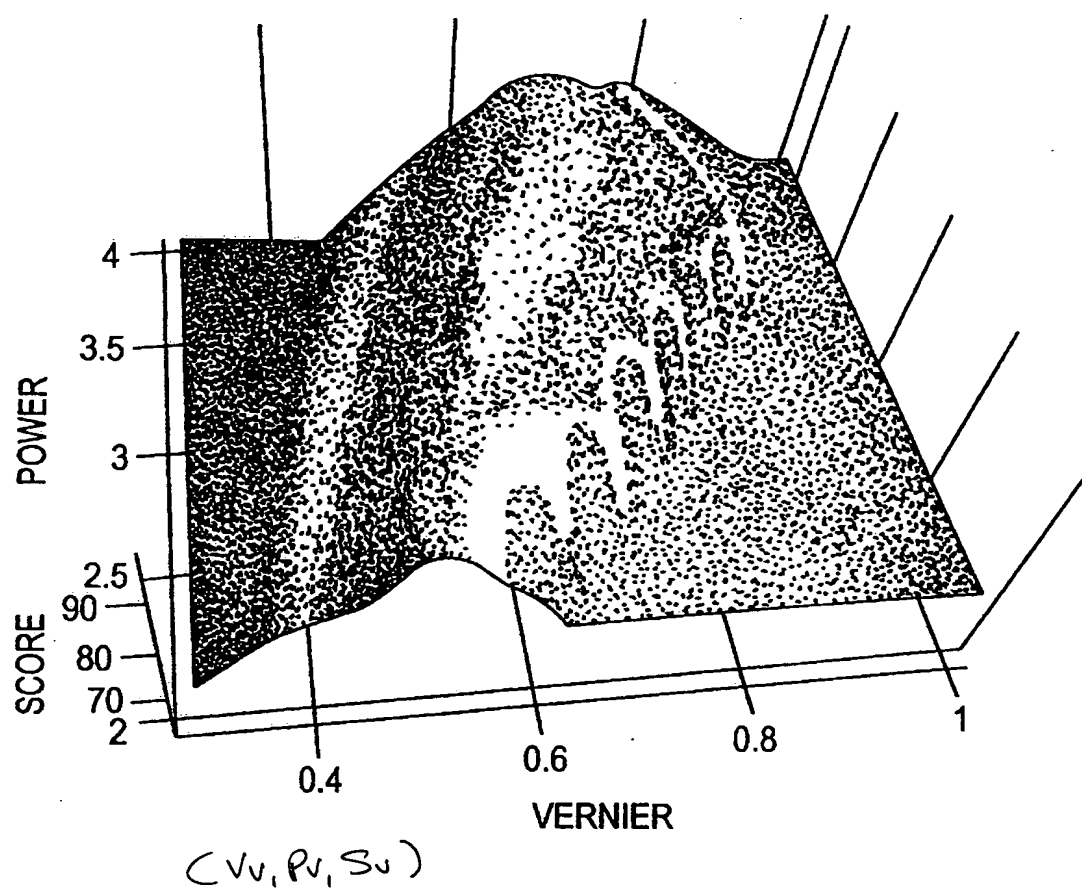


FIG. 18

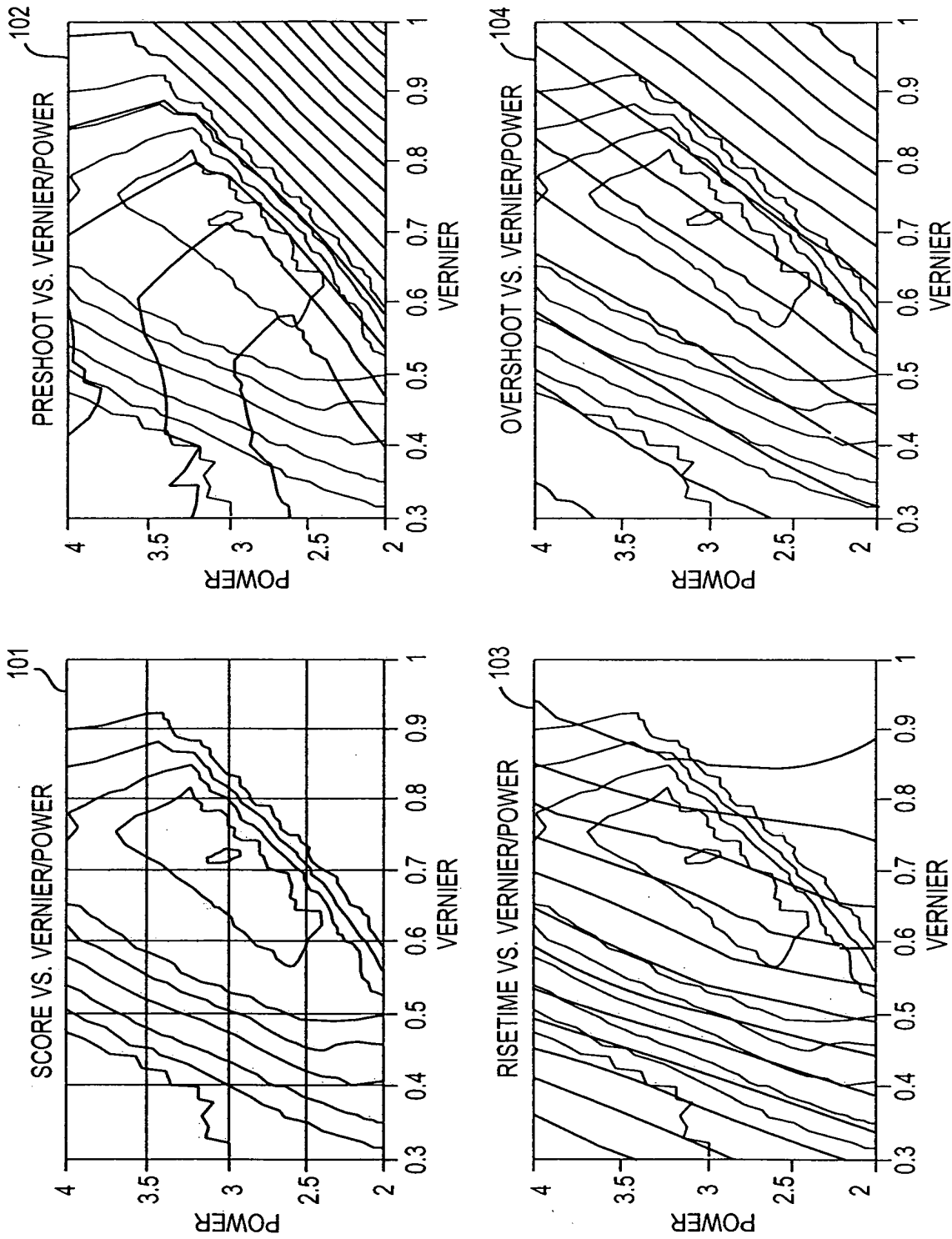


FIG. 19

FIG. 20

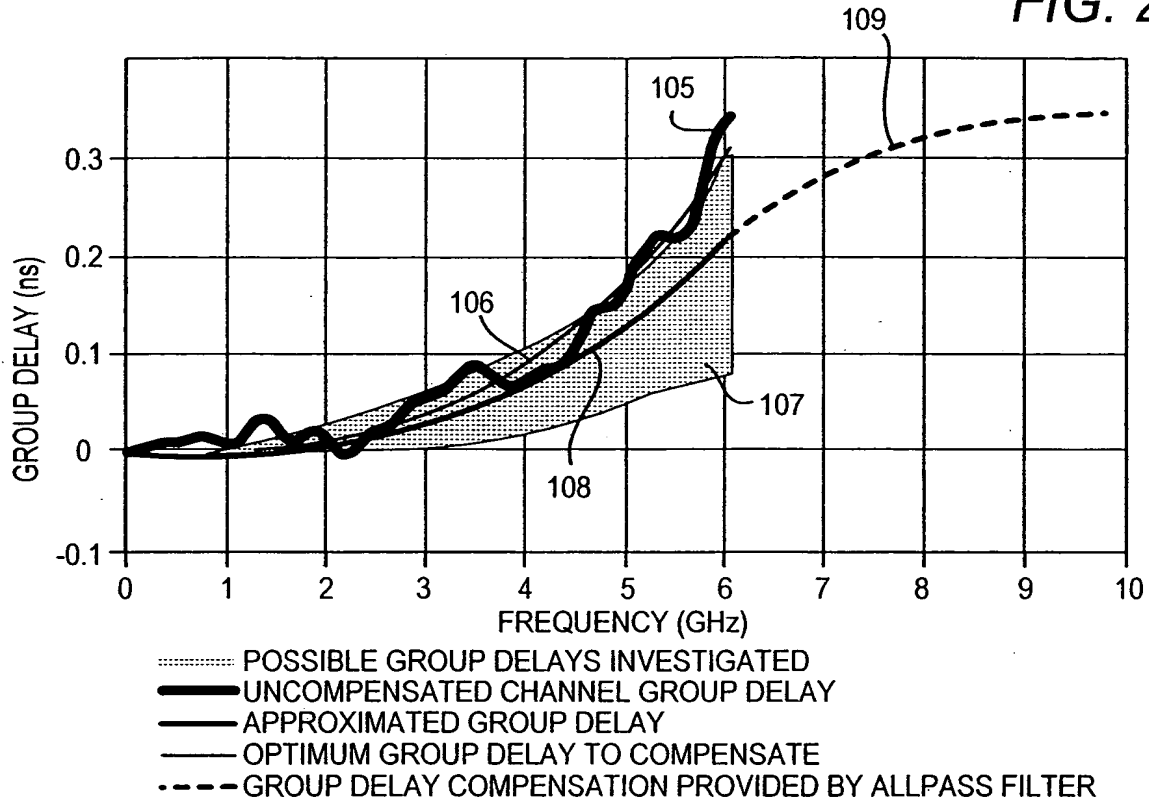


FIG. 21

